THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CLAUDE BISSONNETTE

Appeal No. 96-3191
Application 07/981,352[1]

HEARD: July 15, 1997

Before McCANDLISH, Senior Administrative Patent Judge, and MEISTER and McQUADE, Administrative Patent Judges.

McCANDLISH, Senior Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's rejection of claims 1 through 15. No other claims are pending in the application.

[1] Application for patent filed November 25, 1992.

Appellant's invention relates to a cutting nozzle for a postmixed oxy-fuel gas torch. Such postmixed cutting torch nozzles have separate passages for discharging unmixed streams of cutting oxygen, preheat oxygen and fuel gas, which mix beyond the end of the nozzle where they ignite. By comparison, premix torches or "blowpipes," as they are called, premix streams of the oxygen and fuel gas within the torch body before being discharged from the nozzle.[2] This is an important distinction as will become evident from our review of the examiner's rejections.

According to appellant's invention, the postmixed cutting torch nozzle is provided with a shroud. The shroud extends axially beyond the discharge end of the nozzle by a sufficient distance to protect the discharge end of the nozzle from splashback and to promote a mixing action of the preheat oxygen and the fuel gas streams which are discharged from the nozzle.

[2] See page 2 of appellant's declaration filed August 29, 1994 under 37 CFR § 1.132. At the oral hearing in this case, appellant attempted to play a video cassette tape which accompanied the declaration. When the tape became unraveled from the cassette spools, a substitute tape showing the same demonstration of using a shroud on the nozzle of a premix torch was played for the panel.

Appealed claims 1 and 8 are representative of the claimed subject matter. A copy of these claims, as they appear in the appendix to appellant's brief, is appended to this decision.

The following references are relied upon by the examiner in support of his rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103:

Corrigall et al. (Corrigall)	3,590,212	June 29, 1971
Fuhrhop	4,455,176	June 19, 1984
Jones (Canadian patent)	468,938	Oct. 24, 1950

Claim 8 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Jones, claims 1 through 13 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fuhrhop in view of Jones and claim 14 stands rejected under 35 U.S.C. § 103 as being unpatentable over Fuhrhop in view of Jones and Corrigall.

Considering first the § 102(b) rejection of claim 8, we agree with appellant that Jones discloses a blowpipe in which preheat oxygen and fuel gas are premixed in the body of the torch before being discharged from the nozzle as pointed out in appellant's Rule 132 declaration. The disclosure in column 1, lines 11-17, of the Jones specification does not support the

examiner's contrary position (see page 7 of the answer) that Jones' nozzle is a "postmix torch nozzle."

Jones' description that the nozzle has "a series of heating gas passages parallel with the large oxygen passage" (column 1, lines 15-16) is not tantamount to a disclosure that heating oxygen and fuel gas are discharged from the nozzle in unmixed streams. In fact, Jones' illustrated embodiment shows only two separate gas streams entering the inlet end of the nozzle, thus supporting appellant's position that the "heating gas" mentioned in column 1, line 15 of the Jones specification is a mixture of oxygen and fuel gas.

The preamble of claim 8 therefore distinguishes from Jones by reciting that the nozzle is a cutting nozzle for a postmixed oxy-fuel torch. This preambular recitation is more than a mere statement of intended use because, by definition, it requires separate nozzle passages to discharge the preheat oxygen, the fuel gas and the cutting oxygen in unmixed streams.

Thus, as in *In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994), the preamble of claim 8 must be regarded as a limitation because it gives meaning to the claim

and properly defines the invention. To anticipate claim 8, the Jones reference must therefore disclose a cutting nozzle for a premixed oxy-fuel gas torch. *In re Paulsen*, 30 F.3d at 1479, 31 USPQ2d at 1674.

According to our findings as set forth *supra*, Jones' blowpipe nozzle is of the premix type, not a postmix type. For this reason alone, we cannot agree that Jones anticipates the subject matter of claim 8.

Admittedly, claim 8 does not expressly recite that separate passages are provided for the preheat oxygen and the fuel gas as apparently urged by the examiner on page 1 of the supplemental answer mailed March 7 1997. However, separate passages are implicitly required because of the limitation that the cutting nozzle is for a postmixed torch. Furthermore, even with the adjustability of Jones' sleeve S as described in column 2, lines 43-52, of the Jones specification, the reference contains no disclosure that the sleeve is capable of adjustment by a sufficient distance beyond the discharge end of the nozzle to protect the discharge end from molten metal splashback as recited in claim 8.

For the foregoing reasons, we must reverse the examiner's § 102(b) rejection of claim 8.

With regard to the § 103 rejection of claims 1 through 13 and 15, the postmixed cutting torch nozzle of Fuhrhop lacks a shroud for the nozzle. The examiner nevertheless concludes that the claimed subject matter would have been obvious for the following reasons:

> However, Jones, in Figures 1 and 2, element "S", teaches a sleeve for a torch which reads on the instant shroud. The sleeve is axially fixed on said nozzle (col. 2, lines 40-48). Therefore, it would have been obvious to one having ordinary skill in the metallurgical art at the time the invention was made to add a sleeve to [Fuhrhop's] torch as suggested by Jones because the sleeve can protect the cutting nozzle from an intense heat. [Answer, page 5.]

We cannot agree that the teachings of Jones would have led one of ordinary skill in the art to provide Fuhrhop's postmixed cutting torch nozzle with a shroud in a manner to meet the terms of the appealed claims. In Jones, the sleeve S is employed for two purposes, namely to provide a heat insulating dead air space 42 peripherally around the premix nozzle, and to mount a hard metal facing 45 to reduce wear as the blowpipe is dragged along a

billet to remove slag as discussed on page 2 of appellant's Rule 132 declaration.

Appellant's shroud is not employed for the purposes stated in the Jones specification. Instead, appellant's shroud extends in an axial direction away from the discharge end of the nozzle by an adequate distance to protect the nozzle from molten metal splashback and to promote a mixing action of the preheat oxygen and the fuel gas as set forth, for example, in appealed claim 8. Jones is devoid of any teaching or suggestion of employing his sleeve S for such purposes. In fact, there is no need in Jones' blowpipe for promoting a mixing action of preheat oxygen and fuel gas beyond the discharge end of the nozzle because these streams have already been mixed together within the blowpipe body.

In the final analysis, the only way the examiner could have arrived at his conclusion of obviousness with regard to the appealed claims is through hindsight based on appellant's teachings. Hindsight analysis, however, is clearly improper. *In re Deminski*, 796 F.2d 436, 443, 230 USPQ 313, 316 (Fed. Cir. 1986). We will therefore reverse the examiner's § 103 rejection of claims 1 through 13 and 15. We will also reverse the

examiner's § 103 rejection of dependent claim 14 inasmuch as Corrigall does not rectify the deficiencies of Jones and Fuhrhop.

The examiner's decision rejecting appealed claims 1 through 15 is reversed.

REVERSED

HARRISON E. McCANDLISH)
Senior Administrative Patent Judge)
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JAMES M. MEISTER) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
) INTERFERENCES
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JOHN P. McQUADE)
Administrative Patent Judge)

Appeal No. 96-3191
Application 07/981,352

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APPENDIX

1. A cutting nozzle assembly for a postmixed oxy-fuel gas torch, comprising:

a nozzle having an axial bore through which cutting oxygen gas is discharged and a first and second plurality of spaced apart gas discharge bores arranged in an inner and outer concentric ring around the axial bore, the inner ring being in fluid communication with a fuel gas conduit of the torch when the nozzle assembly is coupled with the torch and the outer ring being in fluid communication with a preheat oxygen gas conduit of the torch when the nozzle assembly is coupled with the torch, the axial bore and the gas discharge bores terminating in discharge orifices on a discharge end of the cutting nozzle assembly; and

a shroud which surrounds and extends in an axial direction away from the discharge end of the nozzle to an open end, said shroud having an axial extent adequte to protect the nozzle from cutting splashback and to promote a mixing action of the gases discharged from the nozzle assembly, and whereby a more narrow cut is achieved to conserve metal at the cut and increase

efficiency of cutting as compared with a similar nozzle not having a shroud.

8. A cutting nozzle for a postmixed oxy-fuel gas torch, comprising:

a nozzle having an intake end and a discharge end, the intake end being adapted to be received in a nozzle seat of the postmixed oxy-fuel gas torch;

the nozzle including passages for conducing cutting oxygen gas, preheat oxygen gas and fuel gas from the torch to the discharge end of the nozzle; and

a shroud which surrounds and extends in an axial direction away from the discharge end of the nozzle to an open end, said shroud having an axial extent adequate to protect the discharge end of the nozzle from molten metal splashback and to promote a mixing action of the preheat oxygen gas and the fuel gas discharged from the nozzle whereby a more narrow cut is achieved to conserve metal at the cut and increase efficiency of cutting as compared with a similar nozzle not having a shroud.